REMARKS

This paper is submitted in response to the non-final Office action that was mailed on July 30, 2007 (the **"current Office Action"**), which maintains various rejections that were set forth in the Office action dated April 7, 2006 (the **"previous Office Action"**).

Claims 1-3, 5-10 and 12-41 are pending.

Claims 1-3, 5-10 and 12-41 stand rejected.

Claims 32, 35-36, 38, and 40 stand rejected under the written description requirement of **35 U.S.C. § 112, first paragraph**. Claims 33-35, 37, 39, and 41 stand rejected under **35 U.S.C. § 101**. Claims 1-2, 5-10, 12-17, 19-22, and 24-30 stand rejected under **35 U.S.C. § 103(a)** as being unpatentable over U.S. Patent No. 6,292,802 issued to Kessenich et al. ("**Kessenich**") in view of U.S. Patent No. 6,694,306 issued to Nishizawa et al. ("**Nishizawa**"). Claims 3, 18, 23 and 31 stand rejected under § 103(a) as being unpatentable over Kessenich in view of Nishizawa and further in view of U.S. Patent No. 6,772,150 issued to Whitman et al. ("**Whitman**").

The amendments add no new matter. Support for the amendments may be found in the Specification as originally filed, for example, on p. 41, lines 9-12 and 18-23; on p. 42, lines 1-4; and on p. 68, lines 3-8.

Applicant respectfully submits that the claims are allowable in view of the above amendments and the following remarks, and respectfully requests that the pending rejections be withdrawn.

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Rejection of Claims under the Written Description Requirement

of § 112, First Paragraph.

Claims 32, 35-36, 38, and 40 stand rejected under the written description requirement of § 112, first paragraph. In particular, the current Office Action argues that the claim language of an "abstraction layer" and of "the abstraction layer provides wrapping" is new matter that is not taught in the Specification as originally filed.

Applicant respectfully disagrees with the assertion that the language in question is new matter. Nonetheless, to further prosecution, Applicant has amended claims 32, 35-36, 38, and 40.

Amended claims 32, 35-36, 38, and 40 do not include new matter. Support for the claims may be found, for example, in the Specification as originally filed, for example, on p. 68, lines 3-8 (describing an example in which, "the 'Search Execution Virtual Bus Comp' will then launch a service called the 'Search Execution Service'. . . . The service is used to provide an <u>abstraction</u> between the business component layer and the search adapter layer" (emphasis added)); and on p. 41, lines 9-12 (describing an example in which, "A Virtual Business Component 2305, 2310 (shown in Figure 23) generally represents external data as a <u>business component, which generally provides a layer of wrapping</u> over database tables" (emphasis added)). Accordingly, Applicant respectfully submits that the claims are allowable under the written description requirement of § 112, first paragraph.

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Rejection of Claims under § 101

Claims 33-35, 37, 39, and 41 stand rejected under § 101. For example, the current Office Action expresses a concern that claim 33 includes a contradiction by requiring that a search execution business service is used to search a database, and is also independent of the database.

Applicant respectfully submits that the claim language in question does not present a contradiction, since a person having ordinary skill in the art would readily understand that a search execution business service may be used to search a database, and may also be used to search other databases, thus being independent of the various databases.

Nonetheless, to further prosecution, Applicant has amended claim 33. As amended, claim 33 includes a limitation that the search execution business service "is not tied to the database," and has access to a plurality of databases.

Support for the amendment may be found, for example, in the Specification as originally filed, for example on p. 42, lines 1-4 (describing an example in which, "Business component objects are typically tied to specific data and tables. On the other hand, business services 2315, 2320, 2325, 2330 are not tied to specific data and tables" (emphasis added)).

Applicant respectfully submits that the amended claim language is clear and would be understood by a person having ordinary skill in the art as operable. Accordingly, Applicant respectfully submits that amended claim 33 is allowable under §101. At least for similar reasons, Applicant respectfully submits that amended claims 34, 35, 37, 39, and 41 are also allowable under §101.

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Rejection of Claims under § 103(a)

Claims 1-2, 5-10, 12-17, 19-22, and 24-30 stand rejected under § 103(a) as being unpatentable over Kessenich in view of Nishizawa. Claims 3, 18, 23 and 31 stand rejected under § 103(a) as being unpatentable over Kessenich in view of Nishizawa and further in view of Whitman. The arguments related to these rejections are set forth on pp. 3-7 of the previous Office Action; the current Office Action references and reiterates these rejections on p. 3.

Applicant respectfully submits that the claims are allowable because the cited references do not provide a motivation for the proposed combination of references and because the cited references, whether taken individually or in combination, do not disclose each limitation of the pending claims.

A person having ordinary skill in the art would not make the proposed combination of references.

The previous Office Action proposes on p. 5 that "[i]t would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Kessenich with the teachings of Nishizawa to include the feature of using a virtual business component in order to allow easy and multiple accesses to a plurality of users to the same data from a plurality of remote servers." Applicant respectfully disagrees with this assertion.

First, the Office Action identifies Nishizawa's virtual table 119 as a virtual business component. The Office Action does not explain how such a table would, or even could, sensibly be incorporated into the system of Kessenich. The Office Action does not identify any data structure in Kessenich that could be substituted by Nishizawa's virtual table 119, or how

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Nishizawa's virtual table 119 could usefully be employed, by substitution or by addition, in the system of Kessenich.

Second, it is not at all clear how such a modification of Kessenich, even if it were feasible, would lend itself to the proposed goal of "allow[ing] easy and multiple accesses to a plurality of users to the same data from a plurality of remote servers." The Office Action does not indicate any rationale why such as substitution or addition of a virtual table would affect user access in the Kessenich system.

Third, Kessenich makes clear that the proposed substitution or modification is unnecessary, since the Kessenich system already, by itself and without modification, achieves the goal that is proposed in the Office Action. Kessenich clearly provides in 6:49-60 that:

> The client/server model depicted in FIG. 1 localizes and modularizes various functions required **to permit such database access by multiple users and web browsers**. In particular, as noted above, a plurality of web browsers 100 may communicate with a single shared web server process (a layer essentially ignored for purposes of describing the present invention). A single web server may invoke a plurality of database client processes on behalf of multiple web browsers due to the multi-threaded nature of the web server process. Further, **a plurality of database client processes 102 may communicate with a single shared database server process 104. Multiple database server processes 104 may share simultaneous access to database file 108** and collection of text documents 106.

(Emphasis added.)

Upon reading Kessenich, therefore, a person having ordinary skill in the art would not turn to another reference, and certainly would not turn to Nishizawa, with the proposed goal of allowing "easy and multiple accesses to a plurality of users," since this goal is clearly and fully

achieved by Kessenich itself. At least for this reason, the rejections under § 103(a) should be withdrawn.

The cited portions of the references fail to disclose each limitation of Applicant's claims.

Applicant's independent claim 1 reads as follows:

1. A method, comprising:
receiving search criteria from a graphical user interface generated by a computing device, wherein the search criteria includes at least one search keyword;
passing the received search criteria to a Virtual Business Component (VBC), the VBC representing a database as a business object;
the VBC invoking a search execution business service;
searching the database for data records matching the search criteria using the search execution business service;
generating search results comprising of the data records matching the received search criteria; and
caching the search results to maintain persistency of the search results.

With regard to the limitations in Applicant's claim 1 of "the Virtual Business Component" in relation to the "search execution business service," the previous Office Action cites elements 106, 108, 109, 112, and 119 of Nishizawa's FIG. 1.

The current Office Action on p. 4 clarifies some of the reasoning of the pending rejection. For example, the current Office Action equates Nishizawa's virtual table 119 with the Virtual Business Component of Applicant's claim 1. In particular, the current Office Action asserts on p. 4 that "a virtual table is literally a virtual business component." The current Office Action also equates a "service of executing a query which has invoked the columns of the virtual table" in Nishizawa with Applicant's search execution business service. The current Office Action cites the following passage of Nishizawa as describing this "query":

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> Here, let us assume that the application 102 issues a query 128
> which references columns on a virtual table 119 in the data
> processing system. In this embodiment, a virtual table is a logical
> integration of multiple real databases and the columns in the virtual
> ta[b]le are mapped to the columns in multiple real databases.

(Nishizawa at 5:33-38.)

Even if the current Office Action's characterization of the cited references is correct (and

Applicant does not concede this point), various limitations of Applicant's amended claim 1 are

not disclosed in the cited passages. For example, in order to meet Applicant's limitation of

"the VBC invoking a search execution business service," Nishizawa would need to disclose

this required relationship between a virtual business component and a search execution business

service. Based on the views asserted in the current Office Action, Nishizawa would logically

need to show, at a minimum, that virtual table 119 is capable of invoking a "service of executing

a query which has invoked the columns of the virtual table."

Nishizawa, however, does not teach that virtual table 119 is capable of invoking such a

service, or indeed that virtual table 119 is capable of invoking any service, because Nishizawa's

virtual table 119 "is a logical integration of multiple real databases and the columns in the virtual

ta[b]le are mapped to the columns in multiple real databases." (Nishizawa at 5:33-38.)

Nishizawa's virtual table 119 is therefore merely a collection of data, and is not a component or

module configured to invoke a service or to perform operations.[1]

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[1] Moreover, the virtual table 119 in Nishizawa would need a reflexive or recursive capability, since according to the views set forth in the current Office Action, a virtual table that invokes Nishizawa's purported "search execution business service" would be a virtual table that is capable of invoking a "service of executing a query which has invoked the columns of the virtual table" (emphasis added). Nishizawa does not in fact teach any such reflexive or recursive capability of virtual table 119.

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Being unable to perform this operation, Nishizawa's virtual table 119 would not, and could not, operate to invoke a search execution business service. Accordingly, this limitation of Applicant's amended claim 1 is absent from Nishizawa.

The shortcomings of Nishizawa are not remedied in the cited portions of Kessenich or Whitman. At least for these reasons, amended independent claim 1 and all claims dependent therefrom are allowable under § 103(a). At least for similar reasons, independent claims 10, 16, 21, and 27, and all claims dependent therefrom are also allowable under § 103(a). Accordingly, Applicant respectfully requests that the rejections under § 103(a) be withdrawn.

CONCLUSION

In view of the remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned.

If any extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, Applicant hereby petition for such extensions. Applicant also hereby authorizes that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to deposit account 502306.

Respectfully submitted,

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